

snout than the extremity of the caudal. Anal, in the male, in the anterior third of the total length, half as long as head and body without caudal fin. Twelve or thirteen scales on the median line between the interorbital space and the first dorsal ray. Caudal fin as long as the head. Pale brown, the scales edged with darker; six to eight vertical black lines on each side of the tail.

Male 25 millim. long, female 42.

Numerous specimens, from Rio Grande do Sul.

XXXIV.—*Notes on the Palæozoic Bivalved Entomostraca.*—  
No. XXVIII.\* *On some Scandinavian Species.* By Prof.  
T. RUPERT JONES, F.R.S., F.G.S., &c.

[Plate XV.†]

SEVERAL fossil Cypridiform Ostracods, such as *Macrocypris*, *Pontocypris*, and *Bythocypris*, from the Upper-Silurian strata of Shropshire, were described and figured in the *Ann. & Mag. Nat. Hist.* ser. 5, vol. xix. (1887), pp. 178–189, plates iv.–vii.; and a few species similar to some of the above-mentioned, and of like age, but from Scandinavia, were treated of *op. cit.* ser. 6, vol. i. (1888), pp. 396–398, pl. xxii. figs. 1–3.

Since then my friend Prof. Gustav Lindström, of Stockholm, has sent to me for examination a series of Ostracoda ‡ from a red clay near Wisby, which is referred to in the column marked “a” in Prof. G. Lindström’s Table of Formations, at p. 8 of my ‘Notes on some Silurian Ostracoda from Gothland,’ 8vo, Stockholm, 1887, and is there termed the “Oldest red shale beds with *Arachnophyllum*,” at the base of the *Stricklandinia*-marls. They are regarded as being on the horizon of the Llandovery formation in England, homotaxially a little below the Upper Llandovery §.

\* No. XXVII. appeared in the *Ann. & Mag. Nat. Hist.* for May 1889, pp. 373 &c.

† This Plate has been drawn with the aid of a grant from the Royal Society for the illustration of the fossil Ostracoda.

‡ Mr. C. Davies Sherborn, F.G.S., has helped me in sorting and comparing these little specimens.

§ The provisional list of these Wisby species, given at p. 410, *Ann. & Mag. Nat. Hist.* June 1888, is now modified as follows:—

*Beyrichia Klædeni* (with hypertrophied front lobe).

*Aparchites*, three species.

*Macrocypris*, one species.

*Pontocypris Mawii*, three varieties.

*Bythocypris*, six species and varieties.

Lately Professor G. Lindström has forwarded for my examination some

The specimens are mostly delicate calcareous representatives of the bivalve carapaces. The forms are so very similar among themselves that it is difficult to arrive at conclusions with certainty as to their exact alliances; but rather than leave them unrecorded and unarranged in any serial order, I venture to refer them, as cautiously as possible, to such generic and specific types as we are acquainted with. In the collections made in and about Shropshire by Messrs. J. Smith and G. R. Vine, and described in the Ann. & Mag. Nat. Hist. already alluded to, are to be found the best known of these types.

### I. MACROCYPRIS, G. S. Brady, 1867.

In these Cypridiform species the left is smaller than the right valve of the carapace. See Ann. & Mag. Nat. Hist. March 1887, p. 178.

#### 1. *Macrocypris? pusilla*, sp. nov. (Pl. XV. figs. 10 a, b.)

Proportions \* :—Length 13. Height 8. Thickness  $5\frac{1}{2}$ .

Taking the narrowest (lowest) and most compressed end for the anterior, we see that the right valve of this carapace strongly overlaps the other. This character is seen in *Macrocypris*, though the general shape of the carapace in the fossil is not that usually met with in the genus, and though the overlap is stronger all round the valve than obtains in the recent *Macrocyprides*. One other somewhat similar little Ostracod (from the Wenlock Limestone, near Malvern) has been provisionally referred to this genus, namely *M.? crassula*†, Jones; but this has very thick valves and is not so reniform as the Gothland specimen under notice.

*Macrocypris? pusilla* has at first sight a strong resemblance

Ostracoda from the Lower Silurian (Caradoc series) of Sweden. They are from the division termed the *Chasmops*-limestone (see page 14 of G. Lindström's 'List of the Fossil Faunas of Sweden: I. Cambrian and Lower Silurian'), and appear to be *Leperditia Keyserlingi*, Schmidt, from Kungs Norrby, Ostergötland, and small *L. Keyserlingi*, with smaller *Leperditia*, a *Beyrichia* near *B. bussacensis*, two *Bollicæ* near to those lately described and figured by Dr. A. Krause in the Zeitschr. d. D. g. Ges. 1889, p. 13 &c., and some other small forms, not determined, from the Westana quarry, Ostergötland.

\* If these proportional numbers be divided by 20, the results will be the measurements in millimetres and parts of a millimetre.

† Ann. & Mag. Nat. Hist. ser. 5, vol. xix. p. 181, pl. vii. fig. 10.

to *Bythocypris Phillipsiana*; but the overlapping valve is the right instead of the left. The dorsal edge is elliptically arched, the ventral nearly straight, and the ends are neatly rounded, with one of them smaller than the other.

*Macrocypris Vinei*, Jones, is also found in an Upper-Silurian (Wenlock) shale at Fröjel in Gothland. Ann. & Mag. Nat. Hist. June 1888, p. 396.

## II. PONTOCYPRIS, G. O. Sars, 1865.

(Ann. & Mag. Nat. Hist. March 1887, p. 182.)

There appear to be three varieties of *Pontocypris Mawii*\*, Jones, in the Silurian clay of Wisby.

1. *Pontocypris Mawii*, Jones, var. *breviata*, nov.  
(Pl. XV. figs. 4 a, b, c.)

Proportions:—L. 20. H. 11. Th. 8.

Shorter and rather thicker than the published type, but still somewhat compressed; hence appearing in side view irregularly subovate, like an orange-pip. It approaches very nearly in outline to the figure of the thick variety of *P. Mawii* † from Fröjel (Wenlock shale), Gothland; but it is too high and blunt anteriorly and is much less convex on the sides. Its hinder extremity is slightly pinched, but not nearly so much as in *Bythocypris caudalis* (figs. 2 and 3).

2. *Pontocypris Mawii*, Jones, var. *proxima*, nov.  
(Pl. XV. figs. 5 a, b.)

Proportions:—L. 21. H. 10. Th.  $9\frac{1}{2}$ .

This is very similar to the type, but is proportionally thicker, that is, more convex, though still retaining a slight flattening on the sides (faces) of the valves, and the anterior slope is less steep.

3. *Pontocypris Mawii*, Jones, var. *divergens*, nov.  
(Pl. XV. figs. 6 a, b, c.)

Proportions:—L. 23. H. 11. Th. 10.

The carapace is here lengthened proportionally, the posterior moiety being contracted above and below, so as to

\* *Op. cit.* pp. 182, 183, pl. iv. figs. 4, 6, and 7.

† Ann. & Mag. Nat. Hist. ser. 6, vol. i. p. 397, pl. xxii. fig. 3.

imitate *P. Smithii* (Ann. & Mag. Nat. Hist. *l. c.* pl. iv. fig. 5) to some extent, but still being much more attenuate and subacute at the ends, although the median convexity is strong.

### III. BYTHOCYPRIS, G. S. Brady, 1880.

(Ann. & Mag. Nat. Hist. March 1887, p. 184.)

1. *Bythocypris Hollii*, Jones, var. *oblonga*, nov.  
(Pl. XV. figs. 1 *a*, *b*, *c*.)

Proportions:—L. 25. H. 14. Th. 13.

This is rather more oblong in side view than the published type \* and also more compressed.

*B. Hollii* has been found also in the Fröjel shale, Gothland.

2. *Bythocypris caudalis*, sp. nov.  
(Pl. XV. figs. 2 *a*, *b*, *c*, and 3 *a*, *b*, *c*.)

Proportions:— $\left\{ \begin{array}{l} \text{Fig. 2: L. 23. H. 12. Th. 12.} \\ \text{Fig. 3: L. 19. H. 11. Th. 9.} \end{array} \right.$

In both the figured specimens the postero-dorsal region slopes more rapidly than in *B. Hollii* and ends with a blunt projecting angle, with which the hinder ends of the valves, being, as it were, squeezed or pinched together, form a kind of caudal process. The antero-dorsal edge also slopes down with a lower curve than in *B. Hollii*, giving a subovate outline to the valves.

Fig. 2 *a*, however, has a bolder and more uniform curve on its postero-dorsal slope than shown in fig. 3 *a*, where the posterior constriction is more strongly marked; this latter variety, too, is shorter, higher in proportion to its length, and has a somewhat fuller ventral curve. In edge view (figs. 2 *b* and 3 *b*) and in end view (figs. 2 *c* and 3 *c*) there is no specific difference.

3. *Bythocypris symmetrica*, Jones, var. *obesa*, nov.  
(Pl. XV. figs. 7 *a*, *b*, *c*.)

Proportions:—L. 17. H. 9. Th. 9.

This carapace is very much like that of *B. symmetrica*, var. *b* (Ann. & Mag. Nat. Hist. *l. c.* p. 186, pl. vii. fig. 4),

\* *Op. cit.* p. 184, pl. v. figs. 1 and 2, and pl. vi. figs. 3 and 4.

but is fuller (more convex) on the sides, in this respect surpassing even var. *a* (*l. c.* fig. 7). It may therefore be taken as var. *d*, or *obesa*, if a subsidiary name be requisite.

*B. symmetrica* was found also in the Fröjel shale of Gothland by Prof. G. Lindström (Ann. & Mag. Nat. Hist. ser. 6, vol. i. p. 397).

4. *Bythocypris phaseolus*, Jones, var. *elongata*, nov.  
(Pl. XV. figs. 8 *a*, *b*, *c*.)

Proportions:—L. 15. H. 7. Th. 8.

This is longer and proportionally lower than the type, and has a straighter back; but its flat sides, rounded ends, incurved ventral margin, and edge view, similar to that in figs. 11 *b*, 12 *b*, pl. vii. Ann. & Mag. Nat. Hist. ser. 5, vol. xix., indicate its close alliance to *B. phaseolus*. We may term it var. *elongata*.

5. *Bythocypris concinna*, Jones. (Pl. XV. figs. 11 *a*, *b*.)

Proportions:—L. 15. H. 8. Th. 8.

This appears to be referable to fig. 6, pl. v. Ann. & Mag. Nat. Hist. ser. 5, vol. xix. pp. 186, 187. It is found also at four other Swedish localities (*op. cit.* June 1888, p. 397).

6. *Bythocypris Phillipsiana*, Jones & Holl, var. *gotlandica*, nov. (Pl. XV. figs. 9 *a*, *b*, *c*.)

Proportions:—L. 14. H. 9. Th. 7.

This is evidently another variety of the persistent \* species *B. Phillipsiana*, but is more compressed (that is somewhat flatter on the sides) than either the type or any of the published varieties.

IV. APARCHITES, Jones, 1889.  
(Pl. XV. figs. 12, 13, 14.)

These specimens have such simply lenticular and round carapaces that at first sight they look as if they belonged to *Polycope*, but they have too much hinge-line for that genus. They are more nearly allied to *Primitia lenticularis*, J. & H. (Ann. & Mag. Nat. Hist. May 1886, p. 408); but differ-

\* From Silurian to Carboniferous times. See Ann. & Mag. Nat. Hist. March 1887, pp. 187, 188.

ences are perceptible in outline and contour. This species, however, with other smooth and still more Leperditoid forms, has been lately referred by me to a separate group, with the generic name *Aparchites* (Ann. & Mag. Nat. Hist. May 1889, pp. 384, 385), and this appears to be the best group to which to refer the specimens (from Wisby) here noticed, although such non-sulcate Primitian forms are rarely so very symmetrical as these.

1. *Aparchites decoratus*, sp. nov.  
(Pl. XV. figs. 12 a, b, c.)

Proportions \* :—L. 18. H. 15. Th. 9½.

Carapace lenticular, almost circular in side view, with the dorsal margin partly straight; equally convex on the sides, as shown by the elliptical outline in fig. 12 b, but rather fuller towards the dorsal than towards the ventral border (fig. 12 c). Surface of valves minutely punctate except along a narrow area all round.

2. *Aparchites simplex*, sp. nov.  
(Pl. XV. figs. 13 a, b, c.)

Proportions :—L. 18. H. 14. Th. 9½.

This smooth, convex, lenticular carapace much resembles *Ap. decoratus*, but it is rather more ovate, one end (anterior) being somewhat elliptically curved and with less boldness than in fig. 12 a; the hinge-line takes up a greater portion of the dorsal margin, giving a definite local straightness, and the surface has no ornament. In these features there is some approach to *Aparchites obsoletus*, J. & H. (Ann. & Mag. Nat. Hist. December 1865, pl. xiii. fig. 12).

3. *Aparchites Lindstræmii*, sp. nov.  
(Pl. XV. figs. 14 a, b.)

Proportions :—L. 13. H. 10. Th. 4½.

This is rather more Leperditoid than either of the two described above, and, excepting that the ends of its dorsal margin are not sharp and that it is less convex and very much smaller, it much resembles *A. Whiteavesii*, Jones (Ann. & Mag. Nat. Hist. May 1889, pp. 384, 385, pl. xvii. fig. 10).

\* For figures 12, 13, 14, the proportions are taken on the same scale as for figs. 1-11.

It is less Leperditoid in shape than *L. suborbiculata* (Münster). I name this species after my friend Prof. G. Lindström, F.C.G.S., who has so carefully and energetically worked at the palæontology of Sweden, and supplied the material for this and other papers on the Ostracoda of that region.

## EXPLANATION OF PLATE XV.

[Figs. 1-11  $\times$  20 diameters, figs. 12-14  $\times$  25 diameters.]

- Fig. 1. *Bythocypris Hollii*, Jones, var. *oblonga*, nov. *a*, carapace, showing the right valve; *b*, ventral view; *c*, anterior view.
- Fig. 2. *Bythocypris caudalis*, sp. nov. *a*, carapace, showing the right valve; *b*, ventral view; *c*, anterior view.
- Fig. 3. The same. *a*, carapace, showing the left valve; *b*, ventral view; *c*, posterior view.
- Fig. 4. *Pontocypris Mawii*, Jones, var. *breviata*, nov. *a*, carapace, showing the left valve; *b*, ventral view; *c*, anterior view.
- Fig. 5. *Pontocypris Mawii*, Jones, var. *proxima*, nov. *a*, carapace, showing the left valve; *b*, edge view.
- Fig. 6. *Pontocypris Mawii*, Jones, var. *divergens*, nov. *a*, carapace, showing the left valve; *b*, edge view; *c*, anterior view.
- Fig. 7. *Bythocypris symmetrica*, Jones, var. *obesa*, nov. *a*, carapace, showing right valve; *b*, edge view; *c*, end view.
- Fig. 8. *Bythocypris phaseolus*, Jones, var. *elongata*, nov. *a*, carapace, showing right valve; *b*, ventral view; *c*, end view.
- Fig. 9. *Bythocypris Phillipsiana*, Jones and Holl, var. *gotlandica*, nov. *a*, carapace, showing right valve; *b*, ventral view; *c*, posterior view.
- Fig. 10. *Macrocypris*? *pusilla*, sp. nov. *a*, carapace, showing left valve; *b*, edge view.
- Fig. 11. *Bythocypris concinna*, Jones. *a*, left valve; *b*, ventral view.
- Fig. 12. *Aparchites decoratus*, sp. nov. *a*, carapace, showing right valve; *b*, ventral view; *c*, end view.
- Fig. 13. *Aparchites simplex*, sp. nov. *a*, carapace, showing right valve; *b*, edge view; *c*, posterior view.
- Fig. 14. *Aparchites Lindstrœmii*, sp. nov. *a*, carapace, showing left valve; *b*, edge view.

## XXXV.—On a new Genus of Coleoptera (Trogositidæ).

By G. LEWIS, F.L.S.

THE species here described belongs to a genus which I believe is widely spread in its distribution but not yet characterized. There are species in the British Museum from the islands of Tropical Asia, and Mr. Pascoe has one or more from Tropical America. I have not examined these last insects